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ABSTRACT

This paper examines how culture and communication are transmitted via storytelling and apprenticeships. Recent studies are reviewed that reveal that storytelling teaches important lessons to students and that other ancient customs, like apprenticeships, are also possible solutions for problems facing contemporary educators. Relevance to technology and distance education is considered. A comparison of ancient storytellers with modern innovators is then presented. The paper concludes with a discussion of why the use of apprenticeships has survived, including the benefits of technology internships, the role of curriculum designers, and the need for ongoing training. (Contains 50 references.) (AEF)

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STORYTELLING AND APPRENTICESHIPS...LEGACIES THAT CAN SUSTAIN TECHNOLOGY

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Whomsoever is still awake at the end of a night of stories will surely become the wisest person in the world. An old family blessing. (Estes, 1996).

Recent studies by Harvard Business School professor, Dr. Gerald Zaltman, report findings that would not have surprised a tribal chieftain a century ago, namely that storytelling successfully teaches important lessons to its students (Lieber,1997). Other ancient customs, like apprenticeships, are also being viewed as possible solutions for problems facing contemporary educators.

At the heart of this research is a quest to discover more insights into human behavior. Several methods of sharing insights and lessons have been passed down through both *civilized* and indigenous peoples which include stories and apprenticeships. Ancient legends of child kings learning from the tutelage of wise mentors remind us of these traditions, stories like Mentor, friend of Odysseus and teacher of his son, Telemacchus (Cavendish,1992); tales of King Arthur and his wise teacher, Merlin. Fairy tales like Cinderella relate Cinderella's pygmalion transformation through the magic of her fairy godmother. Modern day legends conjure up familiar feelings with tales like Star Wars, where Luke Skywalker trains to become a Jedi warrior under the tutelage of his mentor, Yoda. These stories exemplify and perpetuate the human connection through generations and may even resonate some deeper, metasymbolic understanding we have yet to discover (Smith, 1997; Salomon, 1997; Baeten,1995). The compelling question is whether these stories can be harnessed together with the modern technology that often conveys them to provide richer learning experiences.

The intent of this study is to look at how culture and communication are transmitted via storytelling and apprenticeships. Avoiding abstract concepts by honing in on an engaging story, and by using testimonials, becomes important as one person shares her/his stories with others. Working and sharing knowledge with others is a natural extension of this process. Dr. Gerald Zaltman's study of stories and testimonials had been conducted initially for marketing purposes, to find out what made consumers buy certain products. But what he discovered in this study had more far reaching implications. As a result, Dr. Zaltman established a *Metaphor Laboratory* to look at storytelling and testimonials to see what other information people conveyed via stories. His findings revealed that people wanted to tell their story, to give testimonials about what worked successfully. And, since this method of sharing knowledge has worked so successfully across many centuries, the likelihood that it could continue to work successfully seemed strong. It remained to be explored whether the stories communicated in person would have the same impact when transmitted electronically.

There may have been more to the legends that old shamans passed down to their progeny than good fireside stories. The youths in those legends lived and worked alongside their elders. They heard their stories and their emotions and psyches were touched by them. They had the opportunity to follow the examples of their elders. Now, research like that of Dr. Zaltman's, suggests that this type of reinforcement can be beneficial to contemporary lifestyles.

"You have to start with proof, not theory, and the proof comes from the stories" (Lieber, 1997). Testimonials and stories become extremely important as one person shares and passes along his/her experiences with others.

So what does this have to do with technology? Particularly distance education? Distance education is changing the fibre of higher education by its accessibility, but more important, by the actual delivery of its academic messages. Currently most distance education courses are delivered electronically, via cable television, in a linear mode of transmission, or via the internet. It is the belief of this author that academic curricula will increasingly be designed for on-line, internet, course. thus increasing courses offered in a virtual venue of education (Gannon-Cook, 1997a; U.S.A.I.D., 1995). Accordingly, it will become important for future curriculum designers to understand both the delivery vehicle, as well as with the internet courseware. Apprenticeships, or internships, can provide an opportunity to

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familiarize the students with this virtual venue of distance education (Dick, 1995; Willis, B., 1995). They could also help students to construct and scaffold their knowledge of curriculum design. But most of all, these apprenticeships/internships could help students adapt to the constantly changing environment of technology, and prepare them to be change agents by giving them the legacy of shared experiences with their *elders*. These elders could be sixty or twenty-six, sitting next to them in the room, or a thousand miles away (Chalmers, 1997).

Distance education, particularly in higher education, is no longer limited to students at remote locations. Nor is distance education limited in geographic area, social status, or academic qualifications. Higher education is no longer limited to the elite of the academically advantaged, but is now available, virtually, to everyone (Blair & Caine, 1995.)

Today's college students don't have to sit in a classroom to learn or to earn college credits. They have options: they have cable-transmitted classes, videotaped classes, and on-line courses that allow them to complete part, or all, of their degrees on-line.

They are no longer *boxed in* by a limited degree from an American university, a remote Canadian university, or some exotic university in Australia's outback. Students are also no longer relegated to the choices available to them at their local community colleges (League of World Universities, 1997). But the question that is still crucial to on-line, distance education, will be: will this on-line, computerized, *box* provide comprehensive education? Will it also provide educational access that removes socially constructed inhibitors to many who could not, otherwise, receive a college education? Or will it be the proverbial *Pandora's box* that spills out a legion of nightmarish *demons* and backlashes onto the educational world? The ramifications of these new on-line choices are more pervasive than we can now postulate.

The challenges to curriculum and instruction designers in the next ten years will be very different from the challenges of the last fifty years. These challenges may be more akin to those facing educators in the time when the printing press was invented, or when the industrial revolution had just begun in America (Danesi, 1993; McLuhan, 1976; McLuhan, 1968). In each era the paradigm shifted, incorporating the vehicle of communication and content material into the curriculum and the instruction. In each era the availability of education also shifted, providing more information to masses of people who, previously, did not have access to such information. (Stevenson, 1993; Dant, 1991, McLuhan, 1970).

Ancient Storytellers

Just as Gutenberg books were passed on to villagers who had never learned to read, and as children of immigrant factory workers learned in factory modelled schools, the students of today's on-line classes will complete their virtual lessons in their environments and cultures. What this will mean in educational terms, and what this will mean culturally, societally, and politically in the world as we know it, is not discernible yet. But if the medium of conveyance really does become *the messenger* (McLuhan, 1976), then the *messenger* will very likely include a hybrid of every country's educational system and curriculum, every career profession and technology, and every philosophy and political form of government (DelRio & Alvarez, 1995; Wertsch, 1985; McLuhan, 1970).

What helped people survive radical paradigm shifts in the past? There may be few traces of each civilization and era, but what does remain, in addition to some buildings and artifacts, are their legends and stories. Marcus Aurelius related narratives of ancient Rome, gypsies told stories of Czarist Russia, tribal holy men passed on ancient traditions through their initiates. If academia eschews the generational conveyors of traditions and cultures, can future generations rely solely on the archived databases that will be their legacy? Or might these disks resemble indecipherable cuneiform tablets a hundred years from now? The traditions of stories, legends, and apprenticeships, while not favored as educationally *acceptable* conveyors of information in more sophisticated educational venues, do uphold the oral traditions of generations past (Donmoyer, 1997a; Greene, 1997;Eisner, 1997; Gallini, Seaman, & Terry, 1995). And it is likely, at least in homes and communities where cultural traditions are still maintained, these traditions will continue, at least as long as there are *elders* to keep the traditions alive. So what does this mean to technology? Will there continue to be *parallel* forms of communications, oral and technological, or can the twain meet? It already has in technologies like the telephone, television, and the internet. So, how can this convergence combine the oral traditions of storytelling with the newest technological innovations?

Modern Storytellers

A way to begin looking at how to merge the two realms could be to look at how some of the *rebel* technology innovators are designing their work environments. It is not unusual to see huge open spaces in lofts of buildings or in warehouses and many *pods* or clusters of computers huddled around each other so that the people using them can communicate with each other while working in their virtual environments. A *senior* person (whose age could range from 17 to 95, plus or minus) is available to help each *pod* member and spend time mentoring her/him. And, if each member is encouraged to share ideas and experiences, it can encourage storytelling and testimonials. There are also opportunities in environments, like academia, to foster interaction by using apprenticeships and small group learning experiences to pass on rich information to recipients that might, otherwise, be overlooked (Ferris,

Roberts, & Skolnikoff, 1997; Good, Mulryan, & McCaslin, 1997).

Why Apprenticeships Have Survived

Apprenticeships have been used to train artisans from the days of the dark ages. Stories were handed down from elder to apprentice as they worked together skinning hides and drawing pictographs. The apprenticeship practice was adopted by clerical educators and passed on down through time, to contemporary craftsmen and masons. Internships fill the same function as apprenticeships, allowing the intern time to shadow senior workers and to learn their roles and responsibilities. An apprenticeship is defined as "someone learning a craft or trade from an employer to whom he is bound for a specified period, a learner." An internship is defined as "serving as an intern for a period of time." (While the two terms are similar, the term *internship*, however, is seen more often in education, so, it will, hereafter, replace *apprenticeship* when used in an educational context in this study. [New Lexicon Webster's Dictionary,1992].)

Internships allow the students to spend time with an instructor and learn more about that person's duties and responsibilities. As the students get to know the instructor better, they begin a dialogue that includes both stories and testimonials. Often a student can learn important information from informal conversations about how something works, especially in cases where *hands on* learning and/or equipment are involved (Warner, 1997; Lane, 1992). "Stories researchers tell about themselves often have implicit within them fundamentally different stories about teaching, learning, school organization, and the politics of education" (Donmoyer, 1997b; Smith, 1997). The success of the intern/apprentice will depend on the teacher's expertise and facilitation, so he/she will need to "teach the criteria of quality so thoroughly that the apprentice workers can use them on their own" (Peel & McNary III, 1997; Abramson et al, 1997; Burns, 1995). When structured this way, the model of internship could work in a distance education environment as well as in a *same space* environment, where the students are either literally or virtually apprenticing with the instructor(s).

Technology Internships

A technology internship can give the student the freedom to learn, and the freedom to construct her/his own knowledge, in both environments (Willis, J., 1995; Jonnassen, 1994). Moreover, whether that internship is on-site or virtual, it can provide a firm knowledge base more global in scope than mere classroom theory (Fernlund, 1995, Stevenson, 1993). No longer boxed in by any delimiters, the student can benefit from the close working relationship with the teacher and eventually learn to create new virtual venues for her/himself. Educational internships in specific areas like curriculum design could provide future curriculum designers with *hands on* experience, where they might, otherwise, not have that opportunity. (Once they have graduated, the exigencies of work and/or teaching often prevent the graduated students from having a mentor and a *safe* venue where they can continue learning.)

Technology Corporations, like IBM, purport that education will become more self-directed in the corporate environment, "shifting control of the learning to the student with distance education technology playing a key role in supporting this vision...diverse student base —different ages, cultures...information overload...pace of technological change...all dictate the need for nonlinear (educational solutions), transferable across language/cultures" (USAID, 1996; Lane, 1992).

In an internship, particularly in a distance education environment, students would quickly learn what does and does not work by working closely with an experienced teacher who would answer their questions, share stories with them, and work side-by-side with them. They could work on videos, courseware, cable configuring, and creating curricula for distance education classes under the tutelage of an expert in that field (Gannon-Cook, 1997a). Ultimately, they would become comfortable experimenting and developing their own zones of proximal development (Chalmers, 1997; Fernlund, 1995; Davydov & Radzikhovskii, 1985). And, while students working with a teacher half a world away may not learn quite as much in that virtual environment as students working next to their instructor, there would still be a relationship, a human bond based on the sharing of experiences and stories. If the human factor was encouraged and emphasized, both the instructor and student would derive the maximum benefit from their interaction as well as learning more about their career field.

Currently there are experimental internships, like the one at the University of Houston, Division of Distance Education, in conjunction with the College of Education, that provide doctoral students an opportunity to intern in Distance Education (Gannon- Cook, 1997b, Brande, L.,1993). Internships like these could provide onsite opportunities to help students see firsthand, and assess what constituted good distance educational course design. Over time, information gathered from this research could help students who will be designing distance education courses to scaffold their own knowledge of what would constitute good distance education courseware.

The hope is that, since educational courseware is now assessable through universities almost everywhere in the world, interns could, ultimately, be placed at other universities offering distance education programs anywhere, literally, or virtually. And, with technology changing so rapidly, and its messages transmitted to the far reaches of the globe, the benefits to curriculum designers who are

knowledgeable in state of the art distance education could be invaluable.

A firsthand experience by this author placed her at Cambridge University through the University of Houston. There I had the opportunity to spend time with an instructor from that hallowed university. I was able to ask him questions, listen to his stories, share anecdotes, and participate in what my instructor called *The Cambridge Experience*.

Part of the inspiration for this study came from my Cambridge adventure. I will never forget one of Brent's (Dr. Robinson's) folktales, based on the *Sabertooth Curriculum* (Robinson, 1995). The story told of how, for years beyond the extinction of the sabertooth, cavemen still taught the art of sabertooth slaying. One day a brave teacher stood up and began to teach buffalo slaying instead of sabertooth slaying. And the cavemen survived. Brent's eyes lit up as he shared the enthusiasm of that buffalo teacher, and Brent's wisdom infused all of us in ways we have yet to discover. While I personally felt that physically *being there* was an invaluable experience that could not be replicated in a virtual realm, there could, no doubt, still be significant benefit in this type of apprenticeship in a virtual environment (Gannon Cook, 1996). The Cambridge course continued in a virtual mode after returning home, thus offering a combined real and virtual experience. This type of internship could provide the optimum learning situation for both students, instructors, and university sponsors.

Messengers of Human Legacy

As educators, we must anticipate and plan curriculum and instruction based on the successful models of the past. Just as the examples of the printing press and industrial revolution extended learning to a broader base of learners, mass delivery of education begets access to unlimited numbers of learners. In the example of the worldwide internet, mass delivery of distance education will extend to infinite numbers of learners from every country and culture. It is incumbent on distance education designers to be knowledgeable about what is and will be available to learners, both in-house at their home universities, as well as globally at other learning institutions.

The future of education will, likely, include even more technology. Higher educational programs that give students the opportunity to learn both the technology and the theory of instructional design optimize their learning environments. Internships like that of the University of Houston provide a rich environment for learning and exploration. While the *messenger* or delivery vehicle of distance education may be technology, the educational message is still created and presented by a human designer. Internships can help aspiring designers to get a perspective of how the process of design integration occurs, not just in theory, or on paper, but in practice, from inception to ongoing operation (Moore & Kearsley, 1996; Loyola, 1994).

A Matter of Course: A Discussion

Ongoing training will continue to be necessary in technology because of its ever-changing nature. Training will be particularly important in distance education venues, or future curriculum designers will be ill-equipped to design courses in those venues (Moore & Kearsley, 1996). Internships and apprenticeships could provide *neutral* learning zones for not only students, but also, ultimately, to corporate and other interested parties who might be serious *seekers* in search of a safe learning harbor (Blair & Caine, 1995; Stevenson, 1993). The legacy of passing down stories of what works...and what doesn't, through intern apprenticeships, might offer students a multi-sensory, nurturing, venue for learning. Incorporating ancient traditions like storytelling and testimonials into technology might help transmute teacher/student hesitation or resistance into acceptance, or at least predispose them to set the course for technology adoption. The hope would be to provide the teachers and students with a legacy of learning that has been successful in the past, and will sustain and thrive in future environments, both real and virtual.

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An intervening factor that made this internship even more memorable was the untimely demise of our instructor upon our return from Cambridge, Dr. Brent Robinson. But, because of this wonderful experience, his stories and legends will live on. They will forever color my teaching and commitment to distance education, along with the others who participated in the course. Special thanks to Dr. Jerry Willis for co-creating this course with Dr. Robinson. Sometimes the educational benefits of internships far surpass one's most creative anticipations.

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